REMARKS

Claims 10-11, 15, 25-26, 30-58, 62, and 66-82 are now pending in the application. Claims 15, 30, 73, and 75 have been amended, and new claims 81-82 added, without introduction of new matter. Favorable reconsideration is respectfully requested in view of the above amendments and the following remarks.

The allowance of claims 10-11, 25-26, 31-40, 41-58, 62, and 66-72 is gratefully acknowledged.

Claims 15, 30, and 73-80 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Easton (USP 5,764,687). (Applicants assume that the Office Action's reference to "admitted prior art" in the first sentence of numbered paragraph 5 was a typographical error, since "admitted prior art" is not mentioned anywhere else in the rejection.) This rejection is respectfully traversed.

Independent claims 15, 30, 73 and 75 have been amended to even more clearly define certain embodiments. In particular, claim 15 now defines "A transceiver for processing code division multiple access signals received through at least two multipath propagation channels to produce at least two combined frequency error estimates". As now amended, the claimed transceiver includes, *inter alia*, "at least two summers for performing weighted summations of groups of the frequency error estimates to provide at least two combined frequency error estimates, wherein each of the combined frequency error estimates corresponds to a respectively different one of at least two base station transmitters." (Emphasis added.)

Independent method claim 30 has been similarly amended.

Independent apparatus claim 73 now defines "An apparatus for estimating at least two frequency errors between a local frequency reference of a receiver and carrier frequencies of two or more transmitters, comprising: frequency error estimators for estimating frequency errors separately for different signal paths; and combiners for combining groups of the frequency error estimates to produce at least two combined frequency error estimates." (Emphasis added.)

Independent method claim 75 has been similarly amended.

Support for these amendments may be found in the specification at, for example, Figure 15A and supporting text spanning pages 19-20.

The Easton patent fails to anticipate any of independent claims 15, 30, 73 or 75 at least because it neither discloses nor suggests performing at least two weighted summations

of groups of the frequency error estimates to provide at least two combined frequency error estimates, wherein each of the combined frequency error estimates corresponds to a respectively different one of at least two base station transmitters.

To illustrate the differences between Applicants' variously claimed embodiments and that which Easton discloses, compare Applicants' Figure 15A with Easton's Figure 2, which is relied on by the Office in support of its rejection. Looking first at Applicants' figure, it can be seen that rays from different signal paths are processed separately, with a separate frequency error estimate being generated for each. In this exemplary embodiment involving only two base stations (embodiments handling more than two base stations are also within the scope of the invention – see, e.g., page19, lines 26-29) a first group of rays originate from a first base station, and a second group of rays originate from a second base station (see application at page 19, lines 24-26). Two summers 504-1, 504-2 are provided, each for combining the frequency estimates associated with a respective one of the base stations (see, e.g., the text set forth in Figure 15A associated with the summers 504-1, 504-2). Each of the combined frequency error estimates corresponds to a respectively different one of the two base stations.

Turning now to Easton's Figure 2, it can be seen that three fingers 12 are provided, one for each ray. Applicants are unable to find anything in Easton that states that different fingers are associated with different base stations. The Office alleges that this is disclosed at column 4, lines 59-65 and element 26 in Figure 2. However, the relied-upon text merely describes the operation of "each base station in a CDMA system". Nothing about the operation of the receiver can be inferred from this text.

In column 3, lines 55-58, Easton indicates that the RAKE receiver provides path diversity in combining path signals having fingers associated with them. Easton mentions soft handoff and the establishment of links between the receiver and two or more base stations. Even if one were to argue from this and Figure 2 that there is an inference that the fingers in Figure 2 could be assigned to different base stations, the element 26 in Figure 2 that the Office relies upon fails to satisfy the language of Applicants' claims in several respects. For one thing, element 26 in Figure 2 is the only "frequency error combiner" in the receiver demodulator 10, and it has only a single output. Thus, it does not appear possible for this element to generate "at least two combined frequency estimates, as now defined in the claims.

Moreover, the frequency error combiner 26 combines estimates from all of the different fingers, regardless of which base station those fingers are associated with. Thus, even if the frequency estimates 44a, 44b, 44c generated by the fingers 12 were associated with different base stations, they are not separately combined in at least two groups, as now defined by the claims.

Easton's frequency error combiner 26 thus appears to compute an average frequency error, averaged over all of the different base stations – not separate combined frequency error estimates for each base station. By contrast, the invention defined by claims 15, 30, 73 and 75 computes separate combined frequency error estimates for each base station.

The Office relies on Easton at column 4, lines 59-65 and element 26 of Easton's Figure 2 for support of its rejection of claims 15 and 30. This reliance is unfounded because in column 4, lines 59-65, Easton merely points out that each base station transmitter has a unique PN offset and transmits its own pilot channel. It does not describe anything at the receiver. There is no notion of each base station having a different frequency offset nor of a receiver estimating such offsets. Element 26 of Fig. 2 actually leads to the opposite conclusion because, as described above, it implies that frequency error estimates per finger are combined to give one average estimate.

In the "Response to Arguments" section of the Office Action, the Office states that "the frequency error estimates from each finger 44a-c are combined and integrated in frequency error combiner to generate a frequency error estimate integrator output." The Office goes on to conclude that "This integrated output frequency error estimate is the frequency error being estimated separately for the pilot of each base station."

With all due respect, the Office's conclusion appears to be without technical merit because it is not understood how a single integrated output frequency error estimate can be a plurality of separately estimated values, one for each base station.

For at least the foregoing reasons, independent claims 15, 30, 73, and 75, as well as claims 74 and 76-80 which variously depend from claims 15, 30, 73 and 75, are believed to be patentably distinguishable over Easton. Therefore, it is respectfully requested that the rejection of these claims under Section 102(b) be withdrawn.

New claims 81-82 have been added to the application without introduction of new matter. These dependent claims are believed to be patentable at least because they each depend from a base claim that defines a frequency error being estimated separately for each

base station / transmitter whose signal is received. Claim 81 further defines the transceiver comprising "a combiner for combining the at least two combined frequency error estimates to provide a relative frequency error estimate, wherein the relative frequency error estimate is used to control the frequency of a local frequency reference oscillator." This feature is illustrated, for example, in FIG. 15A by the summer 517 (see supporting text at page 19, line 34 through page 20, line 1). Easton fails to disclose another combiner for combining frequency error estimates generated by at least two other combiners.

Claim 82 further distinguishes over Easton because it defines that "the at least two combined frequency error estimates are used to correct frequency error in groups of rays." Easton fails to disclose correcting frequency error separately for groups of rays.

The application is believed to be in condition for allowance. Prompt notice of same is respectfully requested.

Respectfully submitted,
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